

WHAT IS CLAIMED IS:

1. A method of producing a silicon carbide powder comprising sintering a mixture containing at least a silicon source and a carbon source, wherein the carbon source is a xylene-based resin.

2. The method of producing a silicon carbide powder according to claim 1, wherein the silicon source is an alkoxysilane compound.

3. The method of producing a silicon carbide powder according to claim 2, wherein the alkoxysilane compound is selected from an ethoxysilane oligomer and ethoxysilane polymer.

4. The method of producing a silicon carbide powder according to claim 1, wherein the mixture is obtained by adding an acid to a silicon source, then, adding to this a carbon source.

5. The method of producing a silicon carbide powder according to claim 1, wherein the mixture is heated under a non-oxidizing atmosphere of 500 to 1000°C before sintering.

6. The method of producing a silicon carbide powder according to claim 1, wherein the mixture is prepared by adding a halogen compound in an amount of 0.5 to 5 mass% to the above-mentioned mixture.

7. The method of producing a silicon carbide powder according to claim 1, wherein sintering is conducted by heating at a rate of 100 to 1000°C /h to 1300 to 1600°C, then, heating at a rate of 50 to 300°C /h to 1900 to 2100°C, then, keeping

at 1900 to 2100°C for 180 minutes or less, under a non-oxidizing atmosphere.

8. The method of producing a silicon carbide powder according to claim 1, wherein the ratio of carbon contained  
5 in the carbon source to silicon contained in the silicon source in the mixture is 1.8 or less in sintering.

9. The method of producing a silicon carbide powder according to claim 1, wherein a halogen or hydrogen halide is added in an amount of 1 to 5 vol% based on the silicon  
10 source and carbon source.

10. The method of producing a silicon carbide powder according to claim 1, wherein post-treatment by heating is conducted after sintering.

11. The method of producing a silicon carbide powder  
15 according to claim 10, wherein the post-treatment is conducted at 2150 to 2400°C.

12. The method of producing a silicon carbide powder according to claim 10, wherein the post-treatment is conducted in an argon atmosphere for 3 to 8 hours.

20 13. A silicon carbide powder produced by the method of producing a silicon carbide powder according to claim 1.

14. The silicon carbide powder according to claim 13, wherein the nitrogen content is 100ppm or less.

25 15. The silicon carbide powder according to claim 13, wherein the nitrogen content is 50ppm or less.

16. The silicon carbide powder according to claim 13

wherein the content of impurity elements is 0.3ppm or less.

17. The silicon carbide powder according to claim 13, wherein the volume-average particle size ( $D_{50}$ ) is 1 to 500  $\mu\text{m}$ .

5        18. The silicon carbide powder according to claim 13, wherein the particle size distribution ( $D_{90}/D_{10}$ ) is 4 or less.

19. A sintered silicon carbide obtained by sintering the silicon carbide powder according to claim 13.

20. The sintered silicon carbide according to claim  
10 19, wherein the volume resistivity is  $1 \times 10^0 \Omega \cdot \text{cm}$  or more.

21. The sintered silicon carbide according to claim 19, wherein the volume resistivity is  $1 \times 10^1 \Omega \cdot \text{cm}$  or more.